Name_____   HW 3.4 Point-Slope Form   Hour_____

In Exercises 1–6, write an equation in point-slope form of the line that passes through the given point and has the given slope.

1. (3, 4) m = 3

2. (-6, 1) m = -4

3. (0, -2) m = $\dfrac{4}{5}$

4. (-1, -3) m = -$\dfrac{1}{3}$
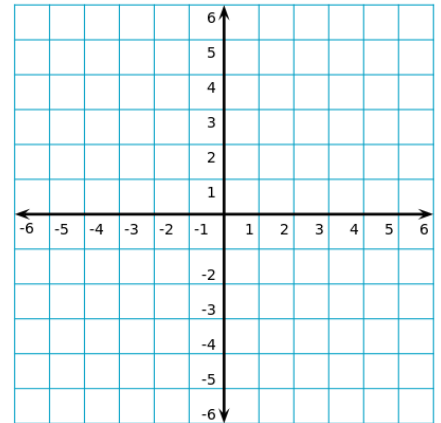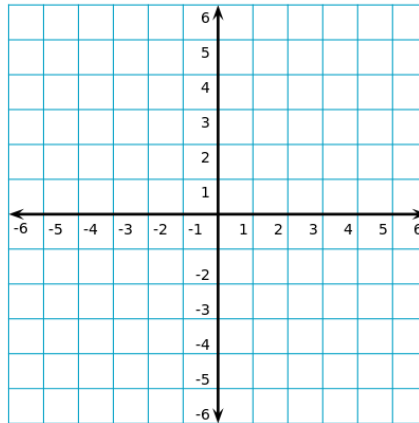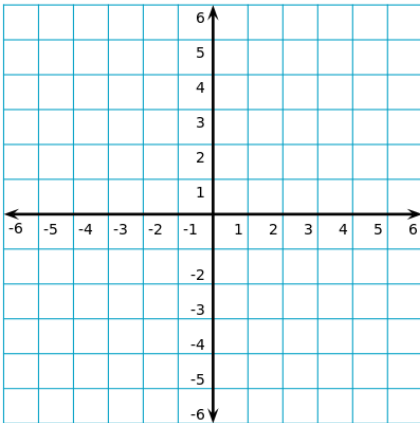
5. (4, 0) m = 2

6. (-1 , 1) m = $\dfrac{1}{3}$

In exercises 7-9, graph the line given a point on the line and the slope.

7. (-6, 5) m = - 2

8. (3, -1) m = $\dfrac{1}{3}$

9. (0, - 4) m = 3

In exercises 10-12, give the slope of the following lines, then name a point on each line.

10. $y + 6 = \dfrac{5}{6}(x + 1)$

11. $y - 3 = -\dfrac{2}{5}(x + 2)$

12. $y = -\dfrac{1}{2}(x - 5)$

Slope =

Slope =

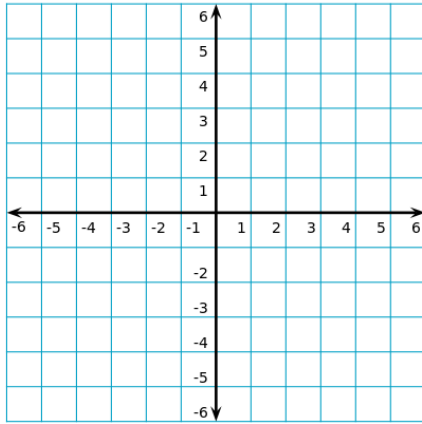Slope =

Point (,   )

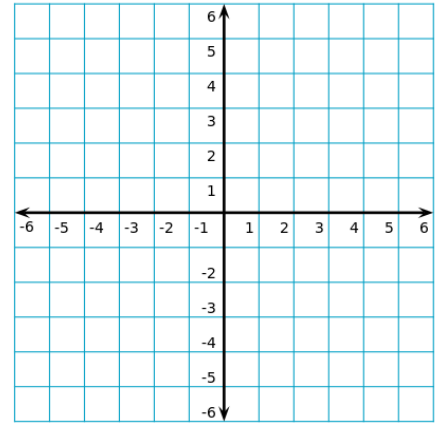Point (,   )

Point (,   )

In exercises 13-14, graph the lines given the equation in point-slope form

13. $y + 2 = 3(x - 1)$

14. $y - 5 = -\frac{3}{4}(x + 4)$

In exercises 15-16, write an equation of the line in point-slope form that passes through the given points

15. (-1, -2) and (2, 4)

16. (3, 0) and (-8, 1)

In Exercises 17–20, convert the equation from point-slope form to slope-intercept form.

17. $y + 6 = -2(x - 4)$

18. $y + 7 = 4(x + 3)$

19. $y - 8 = \frac{1}{3}(x + 9)$

20. $y - 1 = \frac{2}{5}(x + 10)$

21. Is $y - 4 = 3(x + 1)$ an equation of a line through (-2, 1)? Explain.